

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 19, 21-25, 32-35, 37-40, and 58 are presently active in this case, Claims 19, 21, 22, 32, 33, and 37 having been amended, Claims 20, 26-31, 36, and 41-57 having been canceled, and Claim 58 having been canceled by way of the present Amendment. The Applicants submit that all of the amendments are supported by the original disclosure.

In the outstanding Official Action, Claims 19-31 and 42-57 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The specific grounds for rejection are recited in paragraph 2, on pages 2-3, in the Official Action. Claims 20, 26-31, and 41-57 have been canceled thereby rendering the rejections thereof moot. Regarding the rejection of Claim 19, the rejected language has been removed. Accordingly, the Applicants request the withdrawal of the indefiniteness rejections.

Claims 19-31 and 41-48 were rejected under 35 U.S.C. 102(b) as being anticipated by Hertel (U.S. Patent No. 3,226,797). Claims 32-40 and 49-57 were rejected under 35 U.S.C. 103(a) as being unpatentable over Hertel in view of JP 10-291,115. For the reasons discussed below, the Applicants request the withdrawal of the art rejections.

Independent Claims 19 and 32 recite a tip having a first corner with a corner angle of less than 90°, and an adjacent second edge corner with a corner angle of less than 90°. The Applicants submit that neither the Hertel reference, nor the JP 10-291,115 reference teach or suggest, either singularly or in combination, a tip having a first corner with a corner angle of less than 90°, and an adjacent second edge corner with a corner angle of less than 90°.

The Hertel reference describes a cutting body (1) having a right-angled corner (10 in Fig. 1, and 9 in Fig. 2) and an obtuse-angled corner (16 in Fig. 1, and 15 in Fig. 2) that is located at an opposite side of the cutting body (1) from the right-angled corner. Accordingly, no two adjacent corners can be formed with corner angles that are less than 90°, as is recited in Claims 19 and 32 of the present application.

The JP 10-291,115 reference depicts tips having two opposite corners that are at acute angles and two opposite corners that are at obtuse angles. Accordingly, no two adjacent corners can be formed with corner angles that are less than 90°, as is recited in Claims 19 and 32 of the present application.

Accordingly, the Applicants submit that Claims 19 and 32 are allowable over the cited references.

Claims 21-25, 33-35, and 37-40 are considered allowable for the reasons advanced for Claims 19 and 32 from which they depend. These claims are further considered allowable as they recite other features of the invention that are neither disclosed, taught, nor suggested by the applied references when those features are considered within the context of Claims 19 and 32.

Similarly, newly added Claim 58 is considered allowable as it recites features of the invention that are neither disclosed, taught, nor suggested by the references of record. Additionally, the Applicants note that the JP 10-291,115 reference depicts an end mill that uses two different shaped tips. More specifically, due to the shape of the tips, the end mill depicted in the JP 10-291,115 reference has three first tips (3) and one second tip (4) that is a mirror-image of the first tips (3). Such a configuration is disadvantageous, since it requires the user to stock two different types of tips. Claim 58 advantageously recites a cutting tool having a plurality of tips where all of the tips are identical in shape.

Accordingly, the Applicants respectfully request the withdrawal of the art rejections.
Consequently, in view of the above discussion, it is respectfully submitted that the present application is in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.

Respectfully submitted,

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IN THE CLAIMS

19. (Once Amended) A tip comprising a first edge corner having a corner angle of less than 90° [or less], and an [opposite] adjacent second edge corner [defined by at least one opposite cutting edge that is not parallel to a cutting edge of the first edge corner] having a corner angle of less than 90°, wherein the tip is formed of an approximately quadrilateral-shaped plate.

20. (Cancel)

21. (Once Amended) The tip of claim [20] 19, further comprising a third edge corner having a corner angle of less than 90° [or less].

22. (Once Amended) The tip of claim 19, wherein [another] a cutting edge partially defining both the first edge corner and the second edge corner is not parallel to [another] an opposite cutting edge [of the first edge corner].

26-31. (Cancel)

32. (Once Amended) A cutting tool comprising:
a tool body having a distal end; and
a plurality of tips mounted to the distal end of the tool body, each tip of the plurality of tips comprising a plate of substantially quadrilateral shape, the plate having a first corner [defined by two adjacent cutting edges] having a corner angle of less than 90° [or less] and an adjacent second corner having a corner angle of less than 90°, [the plate having an opposite

cutting edge located opposite to one of the two adjacent cutting edges and being in a non-parallel orientation to each other,] wherein [the two adjacent cutting edges are] at least one of the first corner and the second corner is arranged to project along an outer periphery of the distal end of the tool body.

33. (Once Amended) The cutting tool of claim 32, wherein a cutting edge extending from the first corner inward toward the second corner in a radial direction of the tool body is defined as a front cutting edge extending to a rotation axis of the tool body.

36. (Cancel)

37. (Once Amended) The cutting tool of claim [36] 32, further comprising a third [edge] corner having a corner angle of less than 90° [or less].

41-57. (Cancel)

58. (New)